

Keith Raymond Cooper, Ph.D.

Professor of Toxicology

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EDUCATION

1981 Thomas Jefferson University, Philadelphia, PA, M.S. Industrial Toxicology
1979 University of Rhode Island, Kingston, RI, Ph.D. Animal Pathology
1976 Texas A&M University Galveston, TX, M.S. Marine Biology
1973 The College of William & Mary, Williamsburg, VA, B.S. Biology

EMPLOYMENT HISTORY

2005 – 2006 Executive Vice Dean of Agriculture and Natural Resources and
Executive Director of Rutgers' EcoComplex
2002 - 2005 Dean of Research & Graduate Programs/Cook College,
Senior Associate Director/New Jersey Agricultural
Experiment Station (NJAES)
2003 - 2005 Acting Executive Dean of Agriculture and Natural Resources,
Executive Director of New Jersey Agricultural Experiment Station,
Dean of Cook College
2001 - 2002 Associate Dean of Research and NJAES, Cook College, Rutgers
University
1999 - 2001 Chairman, Department of Biochemistry and Microbiology, Cook College
Rutgers University
1994 – present Professor I, Department of Biochemistry/Microbiology
1986 - 1994 Associate Professor, Department of Biochemistry/Microbiology
1981 – 1986 Assistant Professor, Rutgers University, Joint Graduate Program in
Toxicology, Department of Biochemistry/Microbiology, Cook College,
New Brunswick, NJ
1979 -1981 NIEHS Postdoctoral Fellow in Toxicology, Department of
Pharmacology, Thomas Jefferson University, Philadelphia, PA

GRADUATE PROGRAM AFFILIATIONS

2005 – present Ecology, Evolution and Natural Resources

1993 - 2008	Option Coordinator: Environmental Toxicology Option in Environmental Science Graduate Program
1984 - present	Member: Environmental Science Graduate Program
1992 - present	Deputy Director: NIEHS Training Grant, Joint Graduate Program in Toxicology (JGPT)
1998 - 1999	Acting Director JGPT
1992 - 1997	Environmental Toxicology Track Coordinator
1982 - present	Member: Joint Graduate Program in Toxicology
1992 - present	Member: Institute for Marine and Coastal Sciences

HONORS

Sigma Xi, Vice President Hudson/Delaware SETAC Chapter (1988), President and President Elect Hudson/Delaware Society of Environmental Toxicology and Chemistry (SETAC) Chapter (1989-1991), SETAC Academic Committee 1987-1989), Liaison between SETAC and Society of Toxicology (1989-1996), Chairman and member NJ Governors Pesticide Council 1991-2005, Member N.J. Bioterrorism Task Force (2001-2006).

PUBLICATIONS

- 1) Sean M. Bugel, Lori A. White, **Keith R. Cooper**. 2009. Impaired reproductive health of killifish (*Fundulus heteroclitus*) inhabiting Newark Bay, NJ, a chronically contaminated estuary. *Aquatic Toxicology*. (submitted).
- 2) Ming-Wei Chao, John Kozlosky, Iris P. Po, Kathy K. H. Svoboda, Robert Laumbach, **Keith Cooper** and Marion K. Gordon 2009. Capillary endothelial tubes as an in vitro culture model to study the effects of diesel exhaust particles. *Toxicology and Applied Pharmacology*. (in press).
- 3) Hillegass, J., Villano, C.V., **Cooper, K.R.**, and White, L.A. (2009) The role of matrix metalloproteinase expression in zebrafish (*Danio rerio*) craniofacial development. *Matrix Biology* (submitted).
- 4) **Keith R. Cooper** and Wintermyer M. 2009. A Critical Review: 2,3,7,8 – tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD) effects on gonad development in bivalve mollusks. *J. Envir. Science and Health Part C*. (submitted).
- 5) McCormick J.M., Haggblom M.M., **Cooper, K.R.**, and White L.A. 2009. The brominated flame Retardant, Tetrabromobisphenol A (TBBPA) and its metabolites, bisphenol A (BPA) and Tetrabromobisphenol A dimethyl ether (TBBPA DME), cause chemical specific lesions in the developing zebrafish (*Dania rerio*) embryo. *Aquatic Toxicology* (submitted).

- 6) Gloria B. Post, Judith B. Louis, **Keith R. Cooper**, Betty Jane Boros-Russo and Lippincott, R. Lee. 2009. Occurrence and potential significance of perfluorooctanoic acid (PFOA) detected in New Jersey public drinking water systems. *Envir. Sci. Technol.* 43, 4547-4554.
- 7) Spitsbergen, J. M., Blazer, Vicki S., Bowser, Paul R., Cheng, Keith C., Cooper, **Keith R., Cooper**, Timothy K., Frasca Jr., Salvatore, Groman, David B., Harper, Claudia M., Law, Jerry M. (Mac), Marty, Gary D., Smolowitz, Roxanna M., St. Leger, Judy, Wolf, Douglas C., Wolf, Jeffrey C., (2008). Finfish and aquatic invertebrate pathology resources for now and the future, *Comparative Biochemistry and Physiology*, Part C 149 (2009) 249–257 doi: 10.1016/j.cbpc.2008.10.002
- 8) Hillegass, J.M., Villano, C.M., **Cooper, K.R.** and White, L.A. 2008. Glucocorticoids Alter Craniofacial Development and Increase Expression and Activity of Matrix Metalloproteinases in Developing Zebrafish (*Danio rerio*). *Tox Sci* 102, 413-424.
- 9) Hillegass, J.M., Villano, C.M., **Cooper, K.R.** and White, L.A. 2007. Matrix metalloproteinase-13 (MMP-13) is required for zebrafish (*Danio rerio*) development and is a target for glucocorticoids. *Tox. Sci.*100(1), 168-179.
- 10) Domico, L. **Cooper, K.R.**, Bernard, I.P. and Zeevalk, G. 2007. Reactive oxygen species generation by the ethylene-bis-diothiocarbamate (EBDC) fungicide mancozeb and its contribution to neuronal toxicity in mesencephalic cells. *Neurotoxicology*, doi:10.1016/j.neuro.2007.04.008.
- 11) Wintermyer M.L. and **Cooper, K.R.** 2007. The development of an aquatic bivalve model: Evaluating the toxic effects on gametogenesis following 2,3,7,8-tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD) exposure in the eastern oyster (*Crassostrea virginica*). *Aquatic Toxicology*. **81**, 10-26.
- 12) Domico, L., Zeevalk, G., Bernard, L., and **Cooper, K.**, 2006. Acute neurotoxic effects of Mancozeb and Maneb in mesencephalic neuronal cultures are associated with mitochondrial dysfunction. *Journal of Neuroscience*. **27**, 816-825.
- 13) Patyna, P.J., Brown, R.A., Davi, R.A., Letinski, D.J., Thomas, P.E., **Cooper, K.R.** and Parkerton, T.F. 2005. Hazard evaluation of diisononyl and diodecyl phthalate in a Japanes Medaka multigeneration assay. *Ecotoxicology and Environmental Safety*. **65** (1), 36-47.
- 14) Wintermyer, M., Skaidas, A., Roy, A., Yang, Y., Georgapoulos, P., Burger, J. and **Cooper, K.**, 2005. The development of a physiological-based-pharmacokinetic (PBPK) model using the distribution of 2,3,7,8-tetrachlorodibenzo-p-dioxin in the tissues of the eastern oyster (*Crassostrea virginica*). *Marine Environmental Research* **60**, 133-152.

- 15) Gemma J, Mesia-Vela S., Wintermyer ML, **Cooper K.R.**, Kauffman FC and Porte C. 2004. Esterification of vertebrate-like steroids in the eastern oyster (*Crassostrea virginica*). *Marine Environmental Research* **58**, 481-484.
- 16) Hunter J.G., Burger, J and **Cooper K.R.** 2003. Use of an integrated food web model for Ecological Risk Assessment. *J. Environmental Science and Health*. **38**, 1201-1214.
- 17) Wintermyer M. and **Cooper K.** 2003. Dioxin/furan and polychlorinated biphenyl concentrations in eastern oysters (*Crassostrea virginica* Gmelin) tissues and the effects on egg fertilization and development. *J. Shellfish Res.* **22**, 737-746.
- 18) Burger J, Hunter J.G. and **Cooper K. R.** 2001 Using integrated food web and population based models for environmental monitoring and decision making. *Remediation* **12**(1), 87-102.
- 19) Ward P.M., Wohlt J.E., Zajac P.K. and **Cooper K.R.** 2000. Chemical and physical properties of processed newspaper compared to wheat straw and wood shavings as animal bedding. *J. Dairy Sci.* **83**, 359-367.
- 20) Rappe C., Anderson R., **Cooper K.**, Bopp R., Fiedler H., Howell F., and Bonner M. 2000. PCDDs in naturally-formed and man-made lake sediment cores from southern Mississippi, USA. *Organohalogen Compounds*.
- 21) Nacci D., Coiro L., Champlin D., Jayaraman S., Munns Jr., W., Specker J. and **Cooper, K.R.** 2000. Adaptation of wild fish populations to dioxin-like environmental contamination. *Marine Envir. Research* **134**, 9-17.
- 22) Cooper K.R. and Patyna S. A 2000. Multi-generation assay evaluating phthalates in Japanese medaka (*Oryzias latipes*) and biochemical imprinting. Endocrine-disrupting Substance Testing in Medaka, International Symposium. Environmental Agency, Government of Japan. pp. 44-46.
- 23) Iba I. M., Fung J., Cooper K.R., Thomas P.E., Wagner G., Park Y. 2000. Effect of gestational and lactational 2,3,7,8-tetrachlorodibenzo-p-dioxin exposure on the level and catalytic activities of hepatic microsomal Cyp1A in prepubertal and adult rats. *Biochemical Pharmacology* **59**, 1147-1154.
- 24) Patyna, P.J. , Davi, R.D , Parkerton, T.F., Brown, R.P., and Cooper K.R. 1999. A proposed multi generational protocol for Japanese medaka *Oryzias latipes* to evaluate effects of endocrine disrupters. *The Science of the Total Environment* **233**, 211-220.
- 25) Kim, Y-C and Cooper, K.R. 1999. Toxicity of 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) and polychlorinated biphenyls (PCBs) in the embryos and newly hatched larvae of the Japanese medaka (*Oryzias latipes*). *Chemosphere* **39**, 527-538.

- 26) Gould, J.C., Cooper, K.R. and Scanes, C. 1999. Effects of polychlorinated biphenyls on thyroid hormones and liver type 1 monodeiodinase in chick embryo. *Ecotoxicology and Environmental Safety* **43**, 195-203.
- 27) Gould, J., Cooper, K.R. and Scanes, C.G.. 1999. Effects of polychlorinated biphenyl mixtures and three specific congeners on growth and circulating growth-related hormones. *Gen. and Comp. Endocrinology* **106**, 221-230.
- 28) Cooper, K.R. and Chen, C.M. 1998. Toxic interaction of 2,3,7,8-TCDD, 2,3,7,8-TCDF, 1,2,3,7,8-PeCDD and 1,2,3,4,7,8-HeCDD on the Japanese medaka (*Oryzias latipes*). *Chemosphere* **36**,189-202.
- 29) Kim, Y-C and Cooper, K.R. 1998. Interactions of 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) and 3,3',4,4'-petachlorobiphenyl (PCB126) for producing lethal and sublethal effects in the Japanese medaka embryos and larvae. *Chemosphere* **36**, 409-418.
- 30) Nacci, D., Coiro, L., Champlin, D., Munns, Jr., W., Specker, J. and Cooper, K.R. 1998. Nondestructive indicator of exohyresorufin-o-deethylase activity in embryonic fish. *Environ. Toxicol. Chem.* **17**, 2481-2486.
- 31) Rappe, C., Bergek, S., Fiedler, H. and Cooper, K.R. 1998. PCDD and PCDF contamination in catfish feed from Arkansas, USA *Chemosphere* **36**, 2705-2720.
- 32) Burger, J., Martin, M., Cooper, K., and Gochfeld, M. 1997. Attitudes toward environmental hazards: where do toxic wastes fit? *J Toxicol. Environ. Health.* **51**, 279-287.
- 33) Fiedler, H., Cooper, K.R., Bergek, S., Hjelt, M. and Rappe, C. 1997. Polychlorinated dibenzo-p-dioxins and polychlorinated dibenzofurans (OCDD/PCDF) in food samples collected in southern Mississippi, USA. *Chemosphere* **34**, 1411-1419.
- 34) Fiedler, H., Cooper, K.R., Bergek, S., Hjelt, M., Rappe, C., Bonner, M., Howell, F., Willet, K. and Safe, S. 1997. PCDD, PCDF and PCB in farm-raised catfish from southeast United States. *Chemosphere* **34**, 1411-1419.
- 35) Kim, Y.K. and Cooper, K.R. 1997. Toxic potency of 3,3',4,4'-pentachlorobiphenyl relative to 2,3,7,8-tetrachlorodibenzo-p-dioxin in the Japanese medaka early life stage assay. *Organohalogen Compounds* **33**, 333-337.
- 36) Olivieri, C.E. and Cooper, K.R. 1997. Toxicity of 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) in embryos and larvae of the fathead minnow (*Pimephales promelas*). *Chemosphere* **34**, 1139-1150.
- 37) Zhang, Z., Cooper, K.R., Goldstein, B.D. and Witz, G. 1997. Distribution studies in CD-1 mice administered [¹⁴C]muconaldehyde. *Arch. Toxicol.* **71**, 703-708.

- 38) Bae-Kyung, P., Seak-Soon, P., Erstfeld, K., and Cooper, K.R. 1996. Toxicity evaluation of landfill leachate using larval assay for rice fish, *Oryzias latipes*. *Korean J. Env. Biol.* **14**, 56-62.
- 39) Cooper, K.R., Fiedler, H., and Rappe, C. 1996. PCDD/PCDF levels in pond raised catfish. *Organohalogen Compounds.* **28**, 197-201.
- 40) Cooper, K.R. 1996. Effects of polychlorinated dibenzo-p-dioxins and polychlorinated dibenzofurans on aquatic organisms. *Aquatic Sciences*, **2**, 227-241.
- 41) Fiedler, H., Cooper, K.R., and Rappe, C. 1996. Evaluation of PCDD/PCDFs in air samples from southern Mississippi. *Organohalogen Compounds.* **28**, 105-111, 1996.
- 42) Kaur R., Buckley, B., Park, S.S., Kim, Y.K. and Cooper, K.R. 1996. Toxicity test of Nanji Island landfill Seoul, Korea) leachate using Japanese medaka (*Oryzias latipes*) embryo larval assay. *Bull. Environ. Contam. Toxicol.* **57**, 84-90.
- 43) Rappe, C., Fiedler, H. and Cooper, K.R. 1996. Levels of PCDD/PCDF in sediment from southern Mississippi. *Organohalogen Compounds.* **30**, 105-112.
- 44) Cooper, K.R. and Brown, R. 1995. Toxic effects of 2,3,7,8-tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD) and related compounds (PCDD/PCDF) on aquatic invertebrate species and specific studies on the soft-shell clam (*Mya arenaria*). *Organohalogen Compounds* **25**, 339-344.
- 45) Fiedler, H., Lau, C., Cooper, K., Andersson, R., Kulp, S-E., Rappe, C., Howell, F. and Bonner, M. 1995. PCDD/PCDF in soil and pine needle samples in a rural area in the United States of America. 15th International Symposium on Chlorinated Dioxins and Related Compounds, *Organohalogen Compounds.* **24**, 285-292.
- 46) Fiedler, H., Lau, C., Cooper, K., Andersson, R., Kulp, S-E., Rappe, C., Howell, F. and Bonner, M. 1995. PCDD/PCDF levels in sediments from a river system in southern Mississippi. 15th International Symposium on Chlorinated Dioxins and Related Compounds, *Organohalogen Compounds.* **24**, 349-352.
- 47) McGrath, L.F., Cooper, K.R., Georgopoulos, P. and Gallo, M. 1995. Alternative models for low dose-response analysis of biochemical and immunological endpoints for tetrachlorodibenzo-p-dioxin. *Regulatory Toxicology and Pharmacology* **21**, 382-396.
- 48) Olivieri, C.E. and Cooper, K.R. 1995. Comparative toxicity in developmental stages of fish from 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). *Organohalogen Compounds.* **25**, 351-354.
- 49) Prince, R. and Cooper, K.R. 1995. Comparisons of the effects of 2,3,7,8-

- tetrachlorodibenzo-p-dioxin on chemically impacted and nonimpacted subpopulations of *Fundulus heteroclitus*. II. metabolic considerations. *J. of Envir. Toxic. and Chem.* **13**, 589-596.
- 50) Prince, R. and Cooper, K.R. 1995. Comparisons of the effects of 2,3,7,8-tetrachlorodibenzo-p-dioxin on chemically impacted and nonimpacted subpopulations of *Fundulus heteroclitus*. I. TCDD toxicity. *J. of Envir. Toxic. and Chem.* **13**, 579-588.
- 51) Rappe, C., Andersson, M., Bonner, M., Cooper, K., Fiedler, H., Howell, F. Kulp, S.E. and C. Lau. 1995. PCDDs and PCDFs in sediments in a river system in southern Mississippi, USA. 15th International Symposium on Chlorinated Dioxins and Related Compounds, *Organohalogen Compounds*. **24**, 273-280. (2)
- 52) Rappe, C., Andersson, R., Kulp, S-E., Cooper, K., Fiedler, H., Lau, C., Howell, F., and M. Bonner. 1995. Concentrations of PCDDs and PCDFs in soil samples from southern Mississippi. 15th International Symposium on Chlorinated Dioxins and Related Compounds, *Organohalogen Compounds*. **24**, 345-348. (2)
- 53) Zhang, Z., Schafer, F., Schoenfeld, H., Cooper, K.R., Snyder, R., Goldstein B., and Witz, G. 1995. The hematopoietic effects of 6-hydroxy-trans-2,4-hexadienal, a reactive metabolite of trans, trans-muconaldehyde, in CD-1 mice. *Toxicol. and Applied Pharmacology* **132**, 213-219. (2)
- 54) Brown, R., Cooper, K.R. and Cristini, A. 1994. Polychlorinated dibenzo-p-dioxins and dibenzofurans in *Mya aenaria* in the Newark/ Raritan Bay estuary. *J. of Envir. Toxic. and Chem.* **13**, 523-528.

- 55) Cooper, K.R., Fiedler, H., Bergek, S., Andersson, R. Hjelt, M. and Rappe, C. 1995. Polychlorinated dibenzo-p-dioxins (PCDD) and polychlorinated dibenzofurans (PCDF) in food samples collected in Southern Mississippi (USA). 15th International Symposium on Chlorinated Dioxins and Related Compounds, *Organohalogen Compounds*. **26**, 51-57.
- 56) Haasch, M.L., Prince, R., Wejksnora, P.J., Cooper, K.R. and Lech, J.J. 1993. Caged and feral fish: induction of hepatic cytochrome P450 as an environmental biomonitor. *J. of Environ. Toxic. and Chem.* **17**, 885-891.
- 57) Moreno, M.D., Cooper, K.R., and Georgopoulos, P. 1993. A physiologically based pharmacokinetic model for *Mya arenaria*. *Marine Envir. Res.* **34**, 321-325. (1)
- 58) Bentivegna, C.S. and Cooper, K.R. 1993. Reduced chromosomal puffing in *Chironomus tentans* as a biomarker for potentially genotoxic substances. *J. of Envir. Toxic. and Chem.* **12**, 1001-1011.
- 59) Cooper, K.R., Schell, J., Umbreit, T. and Gallo, M. 1993. Fish-embryo toxicity with exposure to soils and sediments contaminated with varying concentrations of dioxins and furans. *Marine Envir. Res.* **35**, 177-180.
- 60) Brown, R.P., Cristini, A. and Cooper, K.R. 1992. Histopathological alterations in *Mya arenaria* following a #2 fuel oil spill in the Arthur Kill, Elizabeth, New Jersey. *Marine Envir. Res.* **34**, 65-68.
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- 65) Haasch, M.L., Quardokus, E.M., Sutherland, L.A., Goodrich, M.S., Prince, R., Cooper, K.R. and Lech, J.J. 1992. CYP1A1 protein and mRNA in teleosts as an environmental bioindicator: laboratory and environmental studies. *Marine Envir. Res.*, **34**, 139-147.

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CHAPTERS IN BOOKS

Cooper, K.R. and Snyder, R. 1988. Benzene Metabolism as it Relates to Molecular Aspects of Benzene Toxicity, Chapter 4: In: *Benzene Carcinogenicity*. Ed. Muzaffer Askoy, CRC Press, Inc. Boca Raton, FL. 33-58 pp.

Cooper, K.R. 1989. Regression of Neoplasms in Invertebrates, Chapter 72: In: *Progressive Stages of Malignant Neoplastic Growth*. Ed. H.E. Kaiser, Martinus Nijhoff, Dordrecht, The Netherlands. 37-40 pp.

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Cooper, K.R. 1990. Effects of Pesticides on Wildlife, Chapter 11: In: *Encyclopedia of Pesticide Toxicology*, Eds. W. J. Hayes, Jr. and E. R. Laws, Academic Press, Inc., 463-491 pp.

Cooper, K.R., Christini, A. and Bernard, S. 1991. The Distribution of 2,3,7,8-tetrachlorodibenzo-p-dioxin in juvenile blue crabs (*Callinectes sapidus*) and the Physiological Effect of Consumption of Food from a Polluted Environment on this Species :In: *Persistent Pollutants in the Marine Environment*, Eds. C.S. Walker and D. Livingston, Plenum Press, 49-62 pp.

Cooper, K.R. and Cristini A. 1994. The Effects of Oil Spills on Bivalve Mollusks and Blue Crabs: In: *Before and After an Oil Spill: The Arthur Kill* Eds. J. Burger and M. Gochfeld, Rutgers Press.

INVITED SCIENTIFIC CONFERENCE PRESENTATIONS, LECTURES, DEMONSTRATIONS 1996-2008

Exxon/Mobile Seminar Series: Methyl-tertbutyl ether is anti-angiogenic in rodent and fish model systems. What is the Mechanism(s)? March 2009.

NJDEP Seminar Series, Historical and Current Impacts from Environmental Chemicals. Trenton, N.J. April 2008.

University of Maine, Impacts of Legacy and Emerging Contaminants on Coastal Aquatic Ecosystems. Orno, Maine October 2008

Society of Toxicology and Environmental Chemistry November 2007. Environmental Epidemiology using the Eastern Oyster (*Crassostrea virginica*) Examining Reproductive Endpoints. Invited platform presentation. Nov. 2007.

Cooper, K.R. Keynote Speaker: Hindsight 20/20 or 20/200? Historical Lessons from Environmental Chemicals. NESETAC meeting June 2007.

Cooper, K.R. Opening Remarks: Extinction of Toxicology? Mid-Atlantic Chapter Society of Toxicology, Fall 2006 meeting Neurotoxicology: Basics and Beyond. Bordentown, New Jersey October 2006.

Cooper, K.R. New Jersey State Agriculture Convention. Future of Land Grant Institutions & Cooperative Extension. Agricultural industry Joint Leadership Meeting. January 24-25, 2005.

Cooper, K.R. Reproductive Impacts of Persistent Organic Compounds on Aquatic Invertebrate Organisms: Passaic River Symposium: Who's Doing What? Montclair State University and NJDOT. Montclair, New Jersey June 9, 2004.

Cooper, K.R. What is The Role of Good Science in Assessing Comparative Risks Dealing with Seafood Consumption? Symposium: Seafood: Assessing the Benefits and Risks. Rutgers Cooperative Extension. New Brunswick, New Jersey. June 8, 2004.

Cooper, K. R. Reproductive Effects of Low Dose Chronic Exposure of Dioxin-Like Compounds on Aquatic Organisms, Implications for Ecosystem Health: A Case study of Eastern Oyster (*C. virginica*) during Gametogenesis. Baltic Envirovet. Vilnius, Lithuania October 15-19, 2003.

Cooper, K.R. Determination of New Jersey Specific Soil Bioaccumulation Factors Using *Lumbricus terrestris*. N.J. Department of Environmental Protection Lecture Series. Trenton, N.J. March 4, 2003.

Cooper, K.R. and Patyna, S. A multi-generation assay evaluating phthalates in Japanese medaka (*Oryzias latipes*) and biochemical imprinting. International Symposium: Endocrine-Disrupting Substance testing in Medaka Nagoya, Japan, March 17-20, 2000

Cooper, K.R. Endocrine disruptors. (Platform Presentation) Hudson-Delaware SETAC Meeting. Stockton, NJ April 27, 2000

Cooper, K.R. Impact of endocrine compounds on reproductive success at the population level (Keynote Speaker). Persistent Contaminants Taipai, Taiwan. May 31, 2000.

Cooper, K.R. Endocrine and reproductive effects following dietary phthalate exposure in the Japanese medaka multi generation assay. University of Florida, Toxicology and Environmental Health Seminar Series. October 8, 1999.

Cooper, K.R. Assays for evaluating water-borne compounds for endocrine biomarkers and developmental effects. Federal-State Toxicology and Risk Analysis Committee Meeting, Princeton, NJ May 5-7, 1999.

Cooper, K.R. Endocrine effects following phthalate exposure. Seton Hall University, Biology Department. West Orange, NJ November 3, 1999.

Cooper, K.R. Effects of pesticides on invertebrates. Rachel Carson: Wildlife, Pesticides and People, Washington, D.C. Sept. 25 & 26, 1998.

Cooper, K.R. Developmental effects in fishes, invertebrate disease in commercial shellfish, Envirovet Course, Duluth, M.N. July, 1998.

Cooper, K.R. Effects of dioxins and dibenzofurans on aquatic animals. University of Maryland, Solomon Island, Chesapeake Biological Laboratory. September, 1997.

Cooper, K.R. Environmental risk assessments: how and why are they carried out. Short Course. American College of Toxicology. November 1996.

Cooper, K.R. Aquatic toxicology and human health risk assessments: shared metabolic pathways, shared mechanisms of action, plus data at the bottom of the dose response curve. Short course lecturer. Society of Toxicology. March 1996.

Cooper, K.R. Toxicology and Ecotoxicology, Two week course offered to environmental engineers. University of Murcia, Spain. March, 1996.

STUDENT TRAINING

Postdoctoral Trainees: (identified by name and years of training).

Dr. Zhanpeng Yuan	2002 –2005.
Dr. Shaoyuan Zhang	2000 - 2002
Dr. Rupindar Kaur	1993 - 1996
Dr. Maria Moreno	1989 - 1991
Dr. Anita George-Ayers	1988 - 1989
Dr. Jan Spitzbergen	1987 - 1988
Dr. Francis Doherty	1986 - 1987

GRADUATE STUDENTS: graduated-16 Doctor of Philosophy students, and have graduated 12 Master of Science Degree students. What is shown below is a table listing the students that I have been their primary advisor, their research area and where they are currently employed.

Doctor of Philosophy Students (1985 – present)

Name, Degree/yr. Program	Area of Research	Current Position
1. V. Kindt, Ph.D./1985, JGPT	Benzene/finfish/model	V.P. Toxicology Merck, PA (retired)
2. M.Berardi, Ph.D./1985, JGPT	MCA/Mice/toxicity	Sr. Toxicologist, Schering, NJ
3. J. Schell, Ph.D./1987, JGPT	Low mol wt. Chlorine cmpds.	Principal Consulting firm TX
4. J. Matroka, Ph.D./1989, JGPT	MCA/Rat/antidote	Professor FSU
5. J. Wisk, Ph.D./1990, JGPT	Dioxin/finfish embryos	Sr. Toxicologist, Bayer NC
6. C. Bentivegna, Ph.D./1991, Env. Sci.	B(a)P/aquatic insect/ chromosome puffing	Chair, Dept. Biology Seton Hall, NJ
7. R. Prince, Ph.D./1993, JGPT	Dioxin/resistant populations/ genetic selection	Program Director Human/Envir. Health Risk, USEPA, Region III
8. R. Brown, Ph.D./1995, JGPT	Dioxin/bivalve/endocrine	Sr. Environmental Manager, Exxon/Mobile TX
9. C. Olivieri, Ph.D./1996, Env. Sci.	Dioxin & PCBs/finfish/ development	International Envir. Affairs/ Bayer, NC
10. J. Gould, Ph.D./1996, Envir. Sci.	PCBs/avian/endocrine	Bristol/Meyers/Squibb, Envir. Toxicologist, NJ
11. Y.K.Kim, Ph.D./1997, Env. Sci.	PCB congener mixtures & dioxins/finfish	Associate Professor, Korea
12. C.M. Chen, Ph.D./1998, Envir. Sci.	Dioxin congener toxicity/finfish	Chairman, Dept. Envir. And Health, (tenured) Taiwan
13. P.J. Patyna, Ph.D./2000, JGPT	Phthalates/finfish/ Endocrine	Reproductive Toxicologist, Pfizer Phama., CA
14. M. Wintermyer, Ph.D./2004 JGPT	Dioxin/bivalve/reproduction	EPA Post Doctoral Fellow RTP, North Carolina
15. R. Zalesky Ph.D./ 2006 Envir. Sci. Co-Adv.	Ozone Toxicity in Plants	Exxon/Mobile Research Scientist Milltown, NJ
16. L. Domico. Ph.D./~2006/JGPT	Fungicide/mice/neurologic PD	Post Doctoral Fellow Univ. of Pennsylvania, Philadelphia
17. J. Hillegass, Ph.D./~2007/JGPT	Corticosteroids effects on zebrafish	Post Doctoral Fellow, Univ. of Vermont medical School
18. S. Bugel/ Env. Sci. 2007 -present	Endocrine Biomarkers in fisinfish	Pre-qualifiers
19. J. Kozlosky/ Env. Sci.	MTBE/Smoke on Neurovasculature	Post-qualifiers (part time). Bristol Meyers Squibb, Princeton
20. J. Bonventre / JGPT 2007- present	MTBE Effects on Angiogenesis	Post-orals

Master of Science Students (1999/2006)

Susan Adair - Effects of multiple chemical exposures from wood treatment facilities on the Japanese medaka. Environmental Science Program, Master of Science. **Graduated May 2000.** Primary Advisor.

Amy Blankenship - Effects of Sewage Effluent on the Reproduction of Mysid Shrimp. Environmental Science Graduate Program, Master of Science. **Graduated May 2000.** Primary Advisor.

Christina Beck – Effects of Ergocryptine on reproduction and CNS dopamine levels in the Japanese medaka. Joint Graduate Program In Toxicology. Master of Science. **Graduated May 2001.** Primary Advisor.

Dawne Gaskin - Toxicity and Mutagenicity Associated with Different Sources of CCC. Environmental Science Graduate Program, Master of Science. **Graduated May 2002.** Primary Advisor.

Sebiha Ahmeti – Brownfield Regulation and their Approach to the Eastern European Countries. Environmental Science Graduate Program, Master of Science. **Graduated May 2002.** Primary Advisor.

Jedd Hillegas - Development of NJ-Specific Soil Bioaccumulation Factors Using *Lumbricus terrestris*. Environmental Science Graduate Program, Master of Science **Graduated May 2003.** Primary Advisor.

Ana Cardoso – Evaluation of 2,3,7,8-Tetrachlorodibenzo-p-dioxin effect on cells in mammalian skin., Environmental Science Graduate Program M.S. **Graduated January 2004.** Co-advisor with Dr. Lori White.

M. Wintermeyer - Effects of 2,3,7,8-TCDD on Development and Calcium Deposition in the Larvae of the American oyster (*Crassostrea virginica*) Environmental Science Graduate Program, Master of Science, **Graduated May 1999.** Primary Advisor

Service Related Activities:

Department of Biochemistry & Microbiology:

Session Chair Biochemistry Section G.H. Cook Honors 2009.

Mentoring Committee for Dr. Lori White: 2005-2008.

Dept. of Biochemistry, merit Awards Committee February 2009.

Departmental Seminar Coordinator or Co-coordinator: Fall 2007, Spring 2009.

University Related:

United States Geological Survey: NJ Water Resources Research Institute Board Member 1990 – 2005

University and State Bioterrorism Task force member 2001 – 2007.

Central University: Planning and Implementation Steering Committee (reorganization) Member 2003.

Faculty Senate - Faculty Affairs and Personnel Committee Member 2003 –2006.

Rutgers University Presidential Search Committee 2002.

P-16 Committee for teacher education (science and math) 2004 – 2006.

University delegate for Council for Environmental Deans and Directors 2004 – 2006.

State Related:

NJDEP: Pesticide Control Council Member (1990)/Chair 1996-2000 .

NJDOA: Aquaculture Advisory Council Member 2001-2006.

NJCAT: Member Board of Directors 2003-2006.

State Agriculture Development Committee (Farmland Affordability/Availability Working Group) 2003-2005.

NJ Sea Grant Member Board of Directors 2004-present.

NJDEP Drinking Water Health Effects sub-committee 2008 - present

NJ Agricultural Experiment Station Related:

Experiment Station North East Research Association: NRSP Review Committee Member national and regional.

NRSP 1: Administrative Advisor 2003-2005.

EDITORIAL REVIEW: GRANT & STUDY SECTION REVIEWER & NATIONAL PANELS

Journal Reviewer :

Aquatic Toxicology (Editorial Board)
Bulletin of Environmental Contamination
& Toxicology
Chemosphere
Cell Biology and Toxicology
Environmental Health Perspectives
Toxicology and Applied Pharmacology
Ecotoxicology

Fundamental and Applied Toxicology
J. of Invertebrate Pathology
J. National Cancer Institute
J. of Water, Air and Soil Pollution
Environmental Toxicology and Chemistry
Toxicological Sciences
American Standards and Testing Materials

Panels and/or Grant Reviewer:

U.S. Environmental Protection Agency: Health Effects Working Group on 2,3,7,8-TCDD (Dioxin Reassessment); Workshop on Ecological Risks of 2,3,7,8-TCDD and “Framework for Ecological risk Assessment” document; STAR Fellowship grant reviewer and Office of Exploratory Research and Endocrine Disruption.

National Academy of Science: Committee member on the Implications of Dioxin in the Food Supply 2001-2003.

National Sea Grant Program Reviewer: Maryland, UNC, Connecticut, Maine and Michigan.

Miscellaneous Agencies: Hudson River Foundation, US Geological Society, Department of Defense (Gulf War Illness Program), NJ Department of Environmental Protection. National Science Foundation external reviewer: Georgia, Union of Concerned Scientist (member).

RESEARCH INTERESTS

My main research interest is comparative toxicology. Over the years I have carried out research that involves rodent models to understand potential human hazards from xenobiotics, and I am still involved in an anti-angiogenesis compound for brain tumors. My main research involves using invertebrates and lower vertebrates as model systems to better characterize environmental impacts on sentinel species in the wild. My current research examines the effects of endocrine disrupting compounds on finfish and bivalve mollusks. The compounds of current interest include dioxin-like compounds, pesticides, gasoline additives and endocrine disruptors. The model systems used for these studies include the Japanese medaka, Zebra fish, and the Eastern oyster. The research on the finfish involves the development of multi-generational studies examining the effects at multiple levels of organization from biochemical to population endpoints. The studies on the American oyster are examining the effects on gonad development and larval development. Both food web and physiological-based-pharmacokinetic models are also being developed in collaboration with researchers at Rutgers and several other institutions. These models will enable to better predict chemical movement both in the environment, as well as within the organism of concern.